

RECLAMATION

Managing Water in the West

WaterSMART Water and Energy Efficiency Program and Water Conservation Field Services Grants: Water Smart Landscape Rebate Program in Clark County, Nevada

Lower Colorado Region, Boulder City, Nevada

Final Supplemental Environmental Assessment



**U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada**

September 2010

FINDING OF NO SIGNIFICANT IMPACT

(FONSI)

LC-10-031

**Bureau of Reclamation
WaterSMART Water and Energy Efficiency Program and Water Conservation Field
Services Grants: Water Smart Landscape Rebate Program
Clark County, Nevada**

Based on a thorough review of the analysis of the environmental impacts presented in the Final Supplemental Environmental Assessment (EA) Reclamation concludes that implementation of the Proposed Alternative that would provide funding through the *Water Sustain and Manage America's Resources for Tomorrow* (WaterSmart) Water and Energy Efficiency Program and the Water Conservation Field Services Program to Southern Nevada Water Authority (SNWA) to initiate, implement, enhance, or continue water conservation plans under SNWA's Water Smart Landscape Rebate Program for the period of 2010-2015, will not significantly affect the quality of the human or physical environment within the project area.

This Finding of No Significant Impact has, therefore been prepared and is submitted to document environmental review and evaluation of the Proposed Alternative in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Prepared:


Environmental Protection Specialist

Date: 9-27-2010

Recommended:


Manager, Environmental Compliance Group

Date: 9/29/10

Approved:


Director, Resources Management Office

Date: 9-29-10

Final Supplemental Environmental Assessment

WaterSMART Water and Energy Efficiency Program and Water Conservation Field Services Grants: Water Smart Landscape Rebate Program in Clark County, Nevada

**Prepared by:
United States Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada**



**U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada**

September 2010

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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1.0 Purpose of and Need for the Action

This Supplemental Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) and the Council of Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA. The purpose of this EA is to evaluate the potential impacts of the proposed project and its alternative on the physical and human environment and determine if the impacts would be significant warranting the preparation of an Environmental Impact Statement.

1.1 Background

Reclamation is proposing to grant the Southern Nevada Water Authority (SNWA) funding through the Reclamation's *Water Sustain and Manage America's Resources for Tomorrow* (WaterSMART) Water and Energy Efficiency (WSWEE) program to continue SNWA's Water Smart Landscapes Rebate Plan (WSL) Program. The authority to dispense WSWEE grants for 2010/2011 is given under the Omnibus Public Land Management Act of 2009.

This grant would allow SNWA to continue its water conservation efforts in Southern Nevada. The program would provide an estimated annual recurring savings of 1,390 acre feet (AF) of water from the Colorado River by creating an incentive for residential property owners by converting turf with water-efficient landscaping. Under the program, a deed of covenant ensures that no turf will be installed in the project area following retrofit. This expansion of the program is projected to result in savings of approximately 1,390 acre-feet of water annually. Water conserved through this project will be used to help meet current and future demands in the face of sustained drought in the Colorado River Basin. (see Appendix C).

In April 2010, The Bureau of Reclamation Lower Colorado Region prepared the Water Conservation Field Services Program (WCFSP) EA and Finding of No Significant Impact (FONSI) for several WCFSP grants. The WCFSP EA included Grant #R10AP30013 in which Reclamation granted SNWA funding to continue the WSL Program in fiscal year 2010.

This EA is a supplement to the April 2010 WCFSP EA and FONSI to amend the proposed action to add grants for WSL under the WSWEE and include additional grants for WSL under the WCFSP for the period of 2010-2015. As a result, the information contained in this EA either summarizes or references information in the April 2010 WCFSP EA.

Both the actions covered under the April 2010 WCFSP EA and FONSI and this new action are typically covered under a Categorical Exclusion (CE). There are three CE categories that cover this type of action in the Department Manual 516 Chapter 14.5. The three categories all cover grant actions under the authority of various Acts passed by Congress. However, there is not yet an established CE to cover actions under the authority for the WSWEE or the WCFSP.

1.2 Purpose and Need

The purpose of this action is to provide funding through the WCFSP and WSWEE to SNWA to initiate, implement, enhance, or continue water conservation plans or programs under the WSL Program for the period of 2010-2015. The program would educate the public on the need for water conserving water and how to conserve water or will provide incentives to the public for implementing water conservation measures.

The need for this action is to promote water conservation within the Lower Colorado River Basin in order to optimally use available water resources. The authority to provide grants for these types of projects listed under the proposed action is given under the Omnibus Public Land Management Act of 2009, Section 9504.

2.0 Description of Alternatives

2.1 No Action Alternative

Under the no action alternative, the WSL program proposed would not be funded and initiated through the WCFSP or WSWE. Water savings through the conservation program that proposes to provide a financial incentive for residential property owners to replace turf with water-efficient landscaping would not occur in conjunction with the WCFSP or WSWE if the no action alternative is selected.

2.2 Proposed Alternative

The proposed alternative would continue the WSL program through WCFSP and WSWE grants.

Under Grant #R10AP30013 SNWA would continue its WSL Program that provides rebates as a financial incentive to encourage the conversion of turf to water efficient and desert tolerant landscaping. The program rebates \$1.50 per square-foot for the first 5,000 square-feet converted per property, and \$1.00 per square-foot for each additional square-foot converted. There would be caps for conversions exceeding \$300,000. The program proposes to convert approximately 8,115,384 square feet of turf that would result in a recurring annual water savings of 1,390 AF per year.

Grant #R10AP30013 would include all landscape conversions rebates that are distributed under the WSL Program between FY2010 and FY2011 (July 1, 2010 – June 30, 2011). This would dependent on customer demands that have been historically steady since the inception of the WSL Program (See Appendix C).

This alternative also includes future grant proposals from SNWA for the WSL programs that fit the purpose and need for this action and have environmental impacts which fall within the range of impacts described in the WCFSP EA.

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

Under the proposed action, the affected environment would be the associated urbanized areas within Southern Nevada discussed in more detail in Section 3.0 of the WCSFP EA.

3.2 Environmental Consequences

The Proposed Action would not have any measurable impacts as discussed in the original WCSFP EA to

- Recreation
- Cultural Resources
- Biological Resources
- Environmental Justice
- Hazardous Materials
- Land use
- Air Quality
- Utilities and Public Services
- Visual Resources
- Socioeconomics
- Geology Soils and Topography.

Therefore, the above mentioned topics will not be analyzed further in this document.

The addition and expansion to the WSL Program under Grant #R10AP30013 poses no changes to the impacts of the following elements discussed in the Environmental Consequences section (4.0) of the original WCSFP EA:

- Lower Colorado River (LCR) Watershed
- Cumulative Impacts

Please refer to Section 3.0 and 4.0 of the WCSFP EA for a more detailed description of the affected environment and further analysis of the environmental consequences for the Proposed Action (see Appendix B).

Included in Appendix A of this EA is a CE checklist that would have been used for this project if there was an appropriate CE category. The CE checklist is used to illustrate the fact that there are no impacts to areas that should be considered when analyzing this proposed project and to also demonstrate the need for a new CE category that would cover this type of action as stated in the WCSFP EA (see Appendix B).

4.0 References

- 2010 Bureau of Reclamation, Lower Colorado Region.
“Water Conservation Field Services Program: FY2010 Grants Environmental Assessment,” dated April 6, 2010, Project Number LC-10-014, prepared by Marc Maynard.

5.0 List of Preparers

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Environmental Protection Specialist
Bureau of Reclamation, Lower Colorado Regional Office

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Appendix A
Categorical Exclusion Checklist

**BUREAU OF RECLAMATION
LOWER COLORADO REGION
CATEGORICAL EXCLUSION CHECKLIST**

CATEGORICAL EXCLUSION NO.: LC-10-031

DATE:

September 3, 2010

PROJECT NAME:

WaterSMART Water and Energy Efficiency Program and Water Conservation Field Services Grants:
Water Smart Landscape Rebate Program in Clark County, Nevada

EVALUATION OF CRITERIA FOR CATEGORICAL EXCLUSION

1. This action or group of actions would have significant effect on the quality of the human environment. (40 CFR 1502.3) No Uncertain Yes .
2. This action or group of actions would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources. (NEPA Section 102(2) (E) and 43 CFR 46.215 (c)) No Uncertain Yes .
3. This action would have significant impacts on public health and safety. (43 CFR 46.215 (a)) No Uncertain Yes .
4. This action would have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas. (43 CFR 43.215 (b)) No Uncertain Yes .
5. The action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks. (43 CFR 43.215 (d)) No Uncertain Yes .
6. This action would establish a precedent for future action or represent a decision in principle about the future actions with potentially significant environmental effects. (43 CFR 46.215 (e)) No Uncertain Yes .
7. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects. (43 CFR 46.215 (f)) No Uncertain Yes .
8. This action would have significant impacts on properties listed or eligible for listing on the National Register of Historic Places as determined by Reclamation. No Uncertain Yes .

(43 CFR 43.215 (g))

9. This action would have significant impacts on species listed or proposed to be listed, on the Threatened or Endangered Species or have significant impacts on designated Critical Habitat for these species. (43 CFR 43.215 (h)) No Uncertain Yes .
10. This action would violate Federal, State, local, or tribal law or requirements imposed for protection of the environment. (43 CFR 46.215 (i)) No Uncertain Yes .
11. This action will adversely affect Indian Trust Assets (ITA). (S.O. 3175) No Uncertain Yes .
12. This action would have a disproportionately high and adverse effect on low income or minority populations. (43 CFR 46.215 (j)) No Uncertain Yes .
13. This action would limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007). (43 CFR 46.215 (k)) No Uncertain Yes .
14. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or result in actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112). (43 CFR 43.215 (l)) No Uncertain Yes .

Appendix B
Water Conservation Field Services Program: FY2010 Grants
Environmental Assessment

Bureau of Reclamation
Water Conservation Field Services Program
FY2010 Grants
Environmental Assessment

Lower Colorado Region, Boulder City, NV

Environmental Assessment # LC-10-014

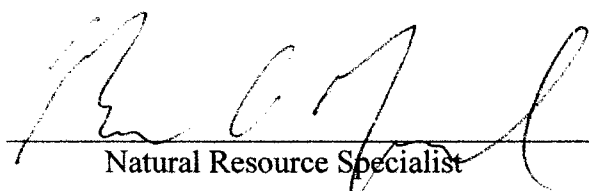
**FINDING OF NO SIGNIFICANT IMPACT
(FONSI)**


LC-10-014


**Bureau of Reclamation
Water Conservation Field Services Program FY2010 Grants
Clark County, Nevada; Washington County, Utah; Mojave County, Arizona**

Based on a thorough review of the analysis of the environmental impacts presented in the Final Environmental Assessment (EA) Reclamation concludes that implementation of the Proposed Alternative will not significantly affect the quality of the human or physical environment within the project area.

This Finding of No Significant Impact has, therefore, been prepared and is submitted to document environmental review and evaluation of the Proposed Alternative in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Prepared:  _____ Date: 4/6/10
Natural Resource Specialist

Recommended:  _____ Date: 4/9/10
Manager, Environmental Compliance Group

Approved:  _____ Date: 4-6-10
Director, Resources Management Office

BACKGROUND

There are three Categorical Exclusion (CE) categories that cover this type of action for the Water Conservation Field Services Program (WCFSP) in the Department Manual 516 Chapter 14.5. The three categories all cover grant actions under the authority of various Acts passed by Congress. The authority to dispense WCFSP grants for FY2010 is given under the Omnibus Public Lands Management Act of 2009, for which there is not yet an established CE category. Although the grant actions themselves for the projects included in the FY2010 WCFSP are covered under the current CE categories the specific authority that these grants are being offered under is not. The Bureau of Reclamation Lower Colorado Region has prepared an Environmental Assessment to properly document the requirements of the National Environmental Policy Act. In the future, the Bureau of Reclamation Lower Colorado Region will seek to add a new CE category that addresses this new authority for WCFSP grants.

Water conserved under the proposed action is many orders of magnitude less than the total amount of water that flows through the Lower Colorado River System. The water proposed to be conserved through these grant programs is so insignificant in the context of water that flows through the Lower Colorado River System that it will not even raise to a point of being measurable in the overall system.

1.0 Purpose and Need for the Action

This Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) and the Council of Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA. The purpose of this EA is to evaluate the potential impacts of the proposed project and its alternative on the physical and human environment.

The purpose of this action is to provide funding through the Water Conservation Field Services Program (WCFSP) to various entities to initiate, implement, enhance, or continue water conservation plans or programs. These plans or programs will either educate the public on the need for and how to of conserving water or will provide incentives to the public for implementing water conservation measures.

The need for this action is to promote water conservation within the Lower Colorado River Basin in order to optimally use available water resources. The authority to provide grants for the types of projects listed under the proposed action is given under the Omnibus Public Land Management Act of 2009, Section 9504.

2.0 Description of Alternatives

2.1 No Action Alternative

Under the no action alternative the projects proposed to be funded by the WCFSP would not be funded. Under the WCFSP in fiscal year 2010 there are two projects that would be continuing from previous years and four projects that are newly proposed. The two continuing projects would be discontinued. The four new projects would not be initiated through the WCFSP. Water savings through conservation programs would not occur in conjunction with the WCFSP if the no action alternative is selected.

2.2 Proposed Alternative

Under the proposed action there would be six projects funded by the WCFSP. Two of the six projects are for projects that have been funded in previous years and would be a continuation of those activities. Four of the six projects being proposed for funding are new projects.

Projects that are a continuation of work from previous years, but with new grant agreements:

Under Grant #R10AP30010, the City of Lake Havasu City, Arizona would carry out a Water Conservation Program to implement water conservation outreach outlined in its 5-year Water Conservation Plan. The work would involve performing water audits in homes throughout the

city, running outreach publication campaign, presenting water programs at the local schools, and continuing a rebate program for the purchase of low-flow toilets for homes built prior to 1990.

Under Grant #R10AP30014 the Washington County Water Conservancy District, Utah would assist in the implementation of two measures identified in the Water Management and Conservation Plan. One measure is to provide assistance in maintaining the outreach aspects of the City's Demonstration Garden, such as: assisting in organizing, planning, and presenting workshops; maintaining garden appearance; keeping current all outreach facets; and providing assistance to visitors. The second measure is to offer rebates for residential and large water users who install a Smart Water Applied Technology device (SWAT). This project would save approximately 23 acre feet of water per year.

New projects:

Under Grant #R10AP30009 the City of St. George, Utah would implement measures from the City of St. George's Water Conservation Plan to continue a rebate program to replace older, high-flow toilets in single family and multi-family units with ultra low-flow and highly efficient models and to replace older high-flow urinals in commercial buildings with WaterSense labeled urinals, which use a half gallon of water per flush or less.

Under Grant #R10AP30011 the City of North Las Vegas, Nevada would distribute digital shower timers at a public event held in August. The digital shower timers are easy for residents to place inside the shower and are used to encourage residents to take shorter showers, thereby reducing in-house water use. Implementation of this measure is a vital portion of the City's effort to promote water conservation and manage its water more efficiently.

Under Grant #R10AP30012 Kyle Canyon Water District, Nevada would develop and implement a water conservation rate structure for the Kyle Canyon Water District. Currently the rate is a flat rate, which seasonal residents only pay when their water is turned on. An underlying goal of the process is to promote water conservation and ensure that all residents pay equitably for operations and system improvement costs. The process is intended to result in a well-designed structure that will balance competing interests, promote water conservation, and increase the sustainability of the system.

Under Grant #R10AP30013 the Southern Nevada Water Authority, Nevada would continue its successful WaterSmart Landscaping (WSL) Program, which provides rebates to encourage homeowners throughout Southern Nevada to convert turf to desert tolerant landscaping. The program rebates customers \$1.50 per square-foot for the first 5,000 square-feet of turf converted per property and \$1.00 per square-foot for each additional square-foot removed,

with caps for large conversions. This project would convert approximately 785,714 square-feet of turf and will result in a recurring annual water savings of 135 AFY.

3.0 Affected Environment

Under the proposed action the affected environment would be urbanized areas within the states of Arizona, Utah, and Nevada. These urbanized areas are specifically the City of St. George and urbanized portions of Washington County (Utah), the City of Lake Havasu City (Arizona), and the Greater Las Vegas Metropolitan area and Kyle Canyon (Nevada).

The actions included in the Proposed Action would not have any measurable impact on Recreation, Cultural Resources, Biological Resources, Environmental Justice, Hazardous Materials, Land Use, Air Quality, Utilities and Public Services, Visual Resources, socioeconomics, and Geology Soils and Topography. Therefore the above mentioned topics will not be analyzed further in this document.

The affected environment for projects associated with Grant #R10AP30010, R10AP30014, and R10AP30009 are compiled together in the following paragraph. These three projects are associated with water conservation plan implementation. Currently residential and commercial developments are operating using appliances that were designed when water was not such a limiting resource. As a result, many of the water using appliances utilize larger amounts of water than necessary to accomplish the specific tasks. Many residents and commercial establishments utilize landscaping to beautify their properties. In the past, landscaping implied that large amounts of water were needed to irrigate plants. With the popularity of desert landscaping growing, a demonstration garden has been established in Washington County to demonstrate to individuals and businesses the principals and benefits of desert landscaping.

The affected environment for the project associated with grant #R10AP30011 is in the urban Las Vegas, Nevada setting. Currently, residents use more time than necessary to take showers. By taking longer showers, an unnecessarily larger amount of water is used that then needs to be. This water then needs to be treated prior to being discharged back into the Colorado River system.

The affected environment for the project associated with grant #R10AP30012 is the service area for the Kyle Canyon Water District, located in Kyle Canyon, Nevada. The project associated with this grant is administrative in nature. Currently residents pay for water through a flat rate that is charged monthly and only when the water to the owner's residents is turned on. This grant is to assist the Kyle Canyon Water District in designing a new rate structure that will

spread the costs associated with the Kyle Canyon water system more equitably across all of the residents.

The affected environment for the project associated with grant #R10AP30013 is in the urban Las Vegas, Nevada setting. Currently many residents in the Las Vegas have grass as a major component of their landscaping. Utilizing grass for landscaping in the desert southwest is a water intense activity. During the hot summer months grass needs to be watered routinely, resulting in excessive water use. Water that is used for watering lawns is lost to evapotranspiration and into the shallow groundwater table. Although this water does not incur the cost of treatment, it is in effect removed from the Colorado River system because it is not accounted for and returned to the Colorado River system through the water treatment system.

4.0 Environmental Consequences

The environmental consequences for all six proposed WCFSP grant projects are compiled together because they are all similar in nature in that they propose to conserve water within the Lower Colorado River (LCR) watershed.

The amount of water that is expected to be conserved through these proposed projects is in the order of hundreds of acre feet per year. The amount of water that flows through the LCR system is on the order of millions of acre feet per year. Water conservation is an important topic in the desert southwest. Return flow systems associated with the LCR (such as the Las Vegas Wash in Las Vegas, Nevada) are important in that they have become established with vegetation and provide habitat for many species of animals and plants and in some areas are incorporated in natural park areas for the public to enjoy.

Due to the fact that the amount of water estimated to be conserved through these proposed projects is many orders of magnitude less than the total amount of water that flows through the LCR system and many orders of magnitude less than the amount of water removed from the LCR system at each point of diversion where the water conservation measures are proposed, impacts of the reduced volume of water being utilized are negligible and virtually non-measurable.

Impacts to the human environment are also non-measurable. These proposed water conservation projects are voluntary programs that will be incorporated into private commercial and residential facilities.

Included as an attachment to this EA is a Categorical Exclusion (CE) checklist (Attachment A) that would have been used for this project if there was an appropriate CE category. The CE checklist is used to illustrate the fact that there are no impacts to areas that should be considered when analyzing this project and also to demonstrate the need for a new CE category that would cover this type of action.

Water conservation in general is a wholly beneficial activity that allows water delivery systems to better allocate their set water allocations from the LCR to areas that benefit the vision of the community being serviced.

4.1 Cumulative Impacts

Due to the nature of these projects being small in size, beneficial in nature, and spread over a large geographic area a cumulative impact analysis is difficult to formulate. The actions included in the proposed action are proposing to conserve water in the LCR watershed, but the amounts proposed to be conserved are truly insignificant in the context of the water that flows through the LCR within a water year. Water that is conserved will be available for use within the water districts that are conserving the water for other uses within the water district and the net flow of water in and out of these water districts will not change significantly or increase beyond currently allocated amounts. The funding for the proposed projects is one time grant funding for activities that will occur within urbanized environments on private lands through voluntary participation and is difficult to gauge the success the projects.

Attachment A

EVALUATION OF CRITERIA FOR CATEGORICAL EXCLUSION

- | | | |
|----|---|--|
| 1. | This action or group of actions would have significant effect on the quality of the human environment.
(40 CFR 1502.3) | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |
| 2. | This action or group of actions would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources. (NEPA Section 102(2) (E) and 43 CFR 46.215 (c)) | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |
| 3. | This action would have significant impacts on public health and safety.
(43 CFR 46.215 (a)) | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |
| 4. | This action would have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas.

(43 CFR 43.215 (b)) | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |
| 5. | The action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.
(43 CFR 43.215 (d)) | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |
| 6. | This action would establish a precedent for future action or represent a decision in principle about the future actions with potentially significant environmental effects.
(43 CFR 46.215 (e)) | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |
| 7. | This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.

(43 CFR 46.215 (f)) | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |
| 8. | This action would have significant impacts on properties listed or eligible for | No <input checked="" type="checkbox"/> Uncertain__ Yes___. |

listing on the National Register of Historic Places as determined by Reclamation.

(43 CFR 43.215 (g))

9. This action would have significant impacts on species listed or proposed to be listed, on the List of Threatened or Endangered Species or have significant impacts on designated Critical Habitat for these species. No Uncertain Yes .

(43 CFR 43.215 (h))

10. This action would violate Federal, State, local, or tribal law or requirements imposed for protection of the environment. (43 CFR 46.215 (i)) No Uncertain Yes .

11. This action will adversely affect Indian Trust Assets (ITA). No Uncertain Yes .

(S.O. 3175)

12. This action would have a disproportionately high and adverse effect on low income or minority populations. No Uncertain Yes .

(43 CFR 46.215 (j))

13. This action would limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007). No Uncertain Yes .

(43 CFR 46.215 (k))

14. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or result in actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112). No Uncertain Yes .

(43 CFR 43.215 (l))

Appendix C
Proposal for the Southern Nevada Water Authority: Water Smart
Landscapes Rebate Program

Southern Nevada Water Authority
WaterSmart Landscapes Rebate Program

Applicant:

Southern Nevada Water Authority

Contact for Further Information:

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Las Vegas, NV 89153

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1. Technical Proposal: Executive Summary

Date: May 3, 2009
Applicant: Southern Nevada Water Authority
Location: 1001 South Valley View Boulevard
Las Vegas, NV 89153
(Clark County)

Project Overview:

As severe and sustained drought in the Colorado River Basin threaten historically stable water supplies and critical water delivery facilities, water conservation has become a vital tool in helping to ensure the delivery of a safe and reliable water supply for Southern Nevada. For nearly a decade, the Southern Nevada Water Authority (SNWA) and its member agencies have implemented one of the most comprehensive and aggressive water conservation programs in the United States. These initiatives have helped to save billions of gallons of water annually, extending the availability of Nevada's limited Colorado River resources.

This project proposal seeks \$1 million in support from the Bureau of Reclamation (Reclamation) WaterSMART Water and Energy Efficiency Grants to support continued water conservation efforts in Southern Nevada. Requested funding will support the 2010/2011 Water Smart Landscapes Rebate Program (WSL Program). The 2010/2011 WSL program will result in an estimated recurring annual savings of 1,390 AFY by converting turf to water efficient landscaping. The SNWA will provide a minimum matching contribution of \$9.55 million for a total project cost of \$10.55 million

Task Area:

The proposed project fits within grant Task Area A, *Water Conservation— projects resulting in quantifiable and sustained water savings or improve water management*. The SNWA's WSL Program provides a financial incentive for property owners to replace turf with water efficient landscaping. The program has proven to be the region's most effective way to achieve significant and lasting conservation gains, providing water-savings that directly extend the region's existing supplies. Turf removed and replaced with water efficient landscaping represents a permanent savings; a deed of covenant ensures that no turf will be installed in the project area following retrofit under the program.

In addition to meeting the objectives of Task Area A, the water conserved through this program supports the goals of Task Area B by providing quantifiable reductions in energy consumption and Task Area D through resultant contributions to existing water banks in California, Arizona and Southern Nevada.

Average annual acre-feet of water supply:

The SNWA and its member agencies depend on the Colorado River for approximately 90 percent of the community's resource needs. The SNWA's primary resource is its share of Nevada's consumptive-use apportionment of 300,000 AFY of Colorado River water. SNWA's members also have groundwater rights in Las Vegas Valley totaling 46,340 AFY. In addition, the SNWA has a right to purchased/leased rights along the Muddy and Virgin rivers and Coyote

Spring Valley groundwater rights, which can be conveyed to the Colorado River for Intentionally Created Surplus (ICS) credit. These resources have a total consumptive use of approximately 42,000 AFY expected to be available during 2010. Total water use in 2009 was approximately 500,600 AF, including groundwater, Colorado River water diversions and direct reuse.

Estimated water saved after project completion:

This 2010/2011 WSL Program will convert approximately 8,115,384 square-feet of turf and will result in a recurring annual water savings of 1,390 AFY.

Over the life of the improvement (50 years), the cumulative recurring impact of the 2010/2011 WSL Program is estimated to result in the savings of approximately 69,500 AF. Calculations of conservation benefits are detailed under Criteria A (see page 10).

Estimated water better managed:

The proposed project supports efforts to meet Southern Nevada's new conservation goal of 199 GPCD by 2035, which will result in the better management of the SNWA's water resources. This included more than 500,000 AF during 2009.

Estimated and current amount of water marketed:

In Southern Nevada, the SNWA serves as a regional water wholesaler, which eliminates the need for direct marketing between municipalities. Instead, unused Colorado River resources are stored for future use in water banks located in Southern Nevada, California and Arizona. The Southern Nevada water bank, established in 1987, has approximately 330,000 AF of credits for future use. The SNWA's California bank has 70,000 AF of credits and Arizona has guaranteed banking 1.25 million acre-feet of credits. SNWA's water conservation gains have helped further the its banking efforts. Since 2004, water efficiency programs have helped allow the SNWA to contribute approximately 120,000 AF of unused Nevada Colorado River water toward interstate banking efforts.

In the event that Colorado River shortages are implemented, the SNWA intends to utilize banked resources to help offset supply availability. Conservation improves the ability to respond to shortages both by directly reducing demand, and be freeing up resources that can be banked for times of emergency. The proposed project will yield a recurring annual water savings of 1,390 AFY, resulting in a cumulative 69,500 AF available for banking over the life of the project.

Length of Time and Estimated Completion Date

The proposed project encompasses all landscape conversion rebates that are distributed under the SNWA's WSL Program during fiscal year 2010/2011 (July 1, 2010 – June 30, 2011). Program participation is dependant on customer demands, and has been fairly steady throughout the year in the past.

2. Technical Proposal: Background Data

The SNWA was formed in 1991 by a cooperative agreement among the following seven water and wastewater agencies in Southern Nevada:

- Big Bend Water District
- City of Boulder City
- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County Water Reclamation District
- Las Vegas Valley Water District

Together, these seven agencies provide water and wastewater service to approximately 2 million residents in the cities of Boulder City, Henderson, Las Vegas and North Las Vegas, and areas of unincorporated Clark County. (The service area is shown in the map included as Appendix A.) As their wholesale water provider, the SNWA is responsible for water treatment and delivery, as well as acquiring and managing short and long-term water resources for Southern Nevada. Within the service area, nearly all the water meets municipal use demands. Since its inception, the SNWA has worked to seek new water resources for Southern Nevada, manage existing and future water resources, construct and manage regional water facilities and promote conservation.

The onset of an historic drought on the Colorado River underscores the critical role of conservation in helping to meet current and future demands. If drought conditions continue, Southern Nevada may be subject to declared shortages (13,000 AFY) on the Colorado River as early as 2012—making Southern Nevada’s conservation efforts even more significant. In addition, further Lake level declines could result in additional shortages (20,000 AFY+) which would further stress the ability of water supply facilities to meet water demands. Water conservation will help to mitigate these concerns

Program Description

Since its creation in 1991, the SNWA has implemented a number of conservation programs focused on reducing water use throughout the community. While the SNWA actively promotes indoor conservation, in Southern Nevada the greatest opportunity for water conservation lies in curbing outdoor water use. According to consolidated data provided by SNWA member agencies, residents account for approximately 59 percent of water use. Approximately, 60 percent of Southern Nevada’s total annual water supply is used consumptively, meaning it can be used just once – commercial and residential landscape irrigation is collectively the single largest consumptive use.

The SNWA has realized significant water savings as part of its conservation program. As a measure of success, since 2002, Southern Nevada’s consumptive water use has declined by approximately 26 billion gallons annually, despite the addition of 400,000 new residents and nearly 40 million annual visitors. In addition, total water use stated in gallons per capita per day (GPCD) has been reduced by more than 70 gallons, with significant progress made towards the community’s a new conservation goal of 199 GPCD by 2035. Achieving this goal is estimated to save nearly 276,000 AFY by 2035, with incremental gains in preceding years.

Since inception, the SNWA has allocated nearly \$160,000,000 to the WSL program, resulting in the removal of more than 140 million square-feet of turf. This represents a cumulative savings of approximately 125,900 AF and annual recurring savings of 24,635 AFY. Due to a substantial decline in connection fees and other revenue streams resulting from current economic conditions, the SNWA cannot sustain historic program funding levels. Despite continued high program demands, the FY 2010/2011 WSL Program budget is 62% lower than the previous year and is projected to fall 30-40% below demands. The Reclamation WaterSMART: Water and Energy Efficiency Grants funding will provide an important contribution to continuing the impact and capacity of this program.

Energy and Environment

Water treatment and delivery is energy intensive. Each acre-foot of water saved will result in an estimated 2,118 kilo-Watt hours (kWh) energy reduction. As a result of the WSL Program, the SNWA saves an estimated 52 million kWh each year, with a total savings of more than 266 million kWh since program inception.

The SNWA obtains energy resources from a number of sources. In 2009, these included 657,000 mega-watt hours (MWH) from the Silverhawk Power Station (79%), 109,643 MWH hydropower generated at Hoover Dam and purchased from Reclamation (13%), 55,080 MWH market purchases (7%), and small quantities of power purchased from NVenergy (1,781 MWH) or generated by SNWA's solar and hydropower projects (3,167 MWH). The energy conserved as a result of the proposed project allows the SNWA to reduce its non-renewable market purchases.

The Colorado River watershed contains a number of sensitive and protected species. Management of the River's resources is key to protecting these species and their habitats. Although the conversion of urban turf landscaping provides no direct benefits to threatened or endangered species, water conservation achievements can indirectly increase Reclamation's flexibility in managing Lake Mead and Colorado River water resources.

Construction activities associated with the conversion of turf will not harm or negatively impact any of Southern Nevada's threatened or endangered species. All landscape conversions will be completed by private parties and implemented on private land within previously developed residential and commercial areas in Southern Nevada.

System Overview and Reclamation Relationship

The SNWA manages the Southern Nevada Water System (SNWS) regional pumping, treatment and delivery facilities for Southern Nevada. SNWS diverts and treats raw Colorado River water from Lake Mead and delivers potable water to Southern Nevada's municipal water purveyors (Las Vegas Valley Water District, City of Henderson, City of North Las Vegas and the City of Boulder City).

Water is extracted via two 600 million gallons per day (MGD) raw water intakes submerged within Lake Mead (located at elevation 1,050 and 1,000 feet, respectively). Water collected at these diversion points is transported to and treated at one of the SNWA's two water treatment facilities. In 2008, these facilities treated and delivered an average of approximately 400 MGD and have a maximum capacity of 900 MGD. Treated water is delivered to the municipal water

purveyors through more than 160 miles of large diameter pipeline, which bisect the Las Vegas Valley and connect to purveyor systems. The SNWA facilities support water distribution to more than 500,000 customer accounts and nearly 2,000,000 residents in Southern Nevada.

The SNWA receives delivery of Colorado River water from Reclamation under several contracts held by the SNWA or its member agencies, as listed below:

SNWA Contracts:

- Contract Number 2-07-30-W0266, Amendment Number 1, Amended and Restated Contract with the Southern Nevada Water Authority, for the Delivery of Colorado River Water
- Contract Number 7-07-30-W0004, Amendatory and Supplemental Contract between the United States and the State of Nevada for the Delivery of Water and Construction of Project Works

SNWA Member Agency Contracts:

- Contract Number 14-06-300-978, “Boulder Canyon Project Arizona-California-Nevada Contract for the Delivery of Water,” City of Boulder City
- Contract Number 0-07-30-W0246, Contract for Delivery of Water to City of Henderson
- Contract Number 14-06-300-2130, “Boulder Canyon Project Contract for Delivery of Water to Las Vegas Valley Water District”
- Contract Number 2-07-30-W0269, “Boulder Canyon Project Contract with the Big Bend Water District, Nevada, for the Delivery of Colorado River Water”

The water delivered by SNWA under these contracts is diverted at Reclamation approved diversion points in the Colorado River at Lake Mead and below Hoover Dam. This includes delivery of water through the Robert B. Griffith Water Project (formerly the Southern Nevada Water Project) constructed by Reclamation, as authorized by an Act of the United States Congress.

In addition, the SNWA has established long-standing relationships with Reclamation and has coordinated on a number of initiatives, which include funding for: the Drop 2 Reservoir System Efficiency Project and the Yuma Desalting Plant Pilot Project; development and implementation of interstate water banking agreements with Arizona and California; Colorado River accounting and procedures for return-flow credits; a Xeriscape Conversion Study; and environmental restoration and stabilization initiatives in the Las Vegas Wash.

An agreement between the SNWA and Reclamation Region 9 is under development. Under the Water Conservation Field Services Program, Reclamation Region 9 will provide \$100,000 in funding for the WSL Program, with a SNWA match of \$1,000,000. These grant and SNWA funds are separate from the proposed project funds, including SNWA’s \$9.55 million match.

3. Technical Proposal: Technical Project Description

WaterSmart Landscapes Program Overview:

In Southern Nevada, nearly all water used indoors is recovered, treated and returned to the Colorado River system for return-flow credits. The recycling of Colorado River water used in Southern Nevada is accrued according to the 1984, U.S. Bureau of Reclamation “Procedure for

Determining Return-Flow Credits to Nevada from Las Vegas Wash” and subsequent administrative updates authorized by Reclamation. This process extends Nevada’s Colorado River water supply by nearly 70 percent. As a result, the SNWA’s conservation efforts emphasize reducing outdoor water use, which cannot be recovered through return-flow credits.

The WSL Program is a key component in the SNWA’s efforts to meet its conservation goals. The WSL Program encourages property owners to convert turf by providing a financial incentive to offset a portion of the cost associated with the conversion. The program rebates \$1.50 per square-foot for the first 5,000 square-feet converted per property, and \$1.00 per square-foot for each additional square-foot converted. The maximum award for any property in a fiscal year is \$300,000. Based upon a joint Reclamation/SNWA research project conducted from 1995 to 2000, every square-foot of grass replaced with desert landscaping saves an average of 55.8 gallons of water per year (see Subcriteria A.1 for scientific basis of estimate).

Since 1999, the WSL Program has supported the removal of more than 140 million square-feet of turf grass – resulting in the cumulative conservation of more than 125,900 AF of water total, an annual recurring savings of 24,635 AFY.

The total budget for the 2010/2011 WSL Program is \$10,550,000, a 62% reduction from the previous year. The SNWA will contribute \$9,550,000 in matching contributions, which will be derived from SNWA budgeted 2010/2011 WSL Program funding. At current budget levels, the project will result in the conversion of 8,115,384 square-feet of turf and will save an additional 1,390 AFY.

WaterSmart Landscapes Program Process:

The following details the general process that applicants to the WSL program follow in order to qualify for and receive landscape conversion rebates:

1. **Application** - Single-family property owners must submit an application to the WSL Program via mail or internet. Commercial and institutional properties contact a Programs Coordinator directly.
2. **Pre-conversion site inspection** – All properties must meet eligibility requirements. At the pre-conversion site inspection, SNWA staff document the existing landscape, determine eligibility to participate in the program and explain the program requirements to the property owner or agent.

(Step 1-2 Duration: 14 days)

3. **Six month performance period** – After SNWA deems the property eligible for participation, the property owner is given up to six months to complete the landscape conversion. Subject to SNWA approval, participants may be granted up to six additional months.

(Step 3 Duration: Customer Dependent up to 6 months)

4. **Post-conversion site inspection** – Upon notice from the applicant that the conversion is complete, SNWA will inspect the landscape to ensure it meets minimum requirements and to determine the square footage eligible for rebate. If program requirements are not met, the applicant is given an additional 60 days or the remainder of the six-month time period to take corrective action.
5. **Rebate issuance** – Following a successful post-conversion site inspection, the customer is notified of the rebate amount. The customer acknowledges the amount by signing the form and returning it. A rebate check is then processed and mailed.

(Step 4-5 Duration: 21 days)

On average, this process takes approximately 3-4 months from initial customer request.

Estimated Project Schedule:

As a customer rebate program, the WSL Program is dependant upon customer demand. Historically, rebate issuance has remained relatively steady through the fiscal year. By quarter, expenditures for the FY 2010/2011 WSL Program are anticipated to track the following estimated forecast:

Fiscal Year 2010/2011	Percent	Landscape Converted	Rebate Issuance
Q1 - July 1 – September 30	25%	2,028,846 square-feet	\$2,637,500
Q2 - October 1 – December 31	25%	2,028,846 square-feet	\$2,637,500
Q3 – January 1 – March 31	25%	2,028,846 square-feet	\$2,637,500
Q4 - April 1 – June 30	25%	2,028,846 square-feet	\$2,637,500
Total	100%	8,115,384 square feet	\$10,550,000

4. Technical Proposal: Evaluation Criteria

Criteria A- Water Conservation

Subcriteria A.1—Quantifiable Water Savings:

The total project cost for the 2010/2011 WSL program is \$10,550,000. Based upon past participation, SNWA estimates that the average rebate during the project period will be \$1.30 per square-foot. Based on this cost, the SNWA estimates that 8,115,384 square-feet of turf will be removed through this program in the coming fiscal year (during the grant performance period).

$$\frac{\text{Total Square Feet Converted} \quad \$10,550,000}{\$1.30 \text{ /square-foot}} = 8,115,384 \text{ square-feet}$$

In 1995, a multi-year Xeriscape Conversion Study was implemented as a result of a cooperative agreement between SNWA and Reclamation. Funded in part by Reclamation; the draft final report finished in 2005. This research involved hundreds of participants that were divided into three treatment groups: Xeric Study, Turf Study, and control groups. Data on both household water consumption and water consumption through irrigation submeters was collected. Submeters were installed to determine per-unit area water application for both xeric- and turf

grass-dominated landscapes. The per-unit area savings of xeric- versus turf grass-dominated landscapes as revealed by the submeter data was found to be 55.8 gallons per square-foot per year. This results in a significant savings of 76.4% when considered in the context of all available residential water conservation measures.

Based on the data gathered from the Xeriscape Conversion Study, SNWA is able to determine the water savings realized from landscape conversion projects completed through the WSL Program. The number of square feet of turf converted to Xeriscape under the requirements of the WSL program will determine the number of gallons of water saved.

Based on this figure, the 2010/2011 WSL Program will result in a 1,390 AFY savings per year.

$$\text{Total AFY Saved} = \frac{55.8 \text{ gal} \times 8,115,384 \text{ square-feet}}{325,851 \text{ gal/AF}} = 1,390 \text{ AFY}$$

Beginning in 2009, customers receiving rebates through the WSL Program were conditioned with a property deed restriction which will disallow current and future owners from reinstalling turf on converted properties. Given this use-restriction, the SNWA estimates the expected life of the improvements to be 50 years, or the planning horizon of the SNWA Resource Plan. Over the life of the improvement, the cumulative recurring impact of the 2010/2011 WSL Program is estimated to result in the savings of approximately 69,500 AF.

$$\text{Cumulative Recurring Impact} = 1,390 \text{ AFY} \times 50 \text{ years} = 69,500 \text{ AF}$$

Subcriteria A.2—Percentage of Total Supply:

Total SNWA member customer water use in 2009 was approximately 500,600 AF, including groundwater, Colorado River water diversions (allocation and return-flow credits) and direct reuse. The SNWA meters its Colorado River diversions at individual diversion points in Southern Nevada, including SNWS Intakes 1 and 2. Return-flow credits are based on measured flows at gauges in the Las Vegas Wash. The SNWA reports Colorado River diversions to Reclamation, and the Colorado River Commission of Nevada reports return-flow credits to Reclamation. Nevada Colorado River water diversions, return flow credits, and consumptive use are reported by Reclamation annually in its Colorado River Accounting and Water Use Report.

Water savings resulting from the proposed project represent only a small fraction of the total water supply (.027%). However, the WSL Program is a long-term conservation strategy and cannot be viewed as a single year. Although the incremental gains of each year are small, the overall impact of the program has been significant—since inception, the WSL Program has achieved an annual recurring savings of 24,635 AFY, or 4.9% of total annual water supplies. With the WSL Program budget cut 62% over the previous year, additional funding is critical to continue the program’s momentum, adding year by year incremental gains to the nearly 5% overall savings that the program has achieved to date.

Subcriteria A.3—Improved Water Management:

The proposed project supports efforts to meet Southern Nevada’s new conservation goal of 199 GPCD by 2035, which will result in the better management of the SNWA’s total water resource supply. This included 500,600 AF during 2009--- or better management of 100 percent of total water supplies.

In addition, the project will result in a reduction in transport loss, as water not served (due to conservation efforts) will not experience transport loss.

Subcriteria A.4—Reasonableness of Costs:

Calculating a 50 year improvement life, based on restrictions prohibiting the reinstallation of turf, the cost of investment is \$151.79 per acre-foot.

$$\text{Cost of Investment} \frac{\$10,550,000}{1,390 \text{ AFY} \times 50 \text{ years}} = \$151.79 \text{ per acre-foot}$$

Criteria B- Energy Efficiency

Subcriteria B.1—Implementation of Renewable Energy Projects

The SNWA is committed to conserving energy and focusing on the use of renewable resources. The SNWA voluntarily committed to meet 20 percent of its energy needs through renewable resources by 2015, which parallels Nevada's Renewable Energy Portfolio Standards.

The proposed project does not include construction of renewable energy facilities. However, the project will reduce energy demands and allow the SNWA to focus remaining use on its renewable and efficient energy sources. These include:

- The Silverhawk Power Station, which meets 70% of SNWA’s power demands, employs "dry cooling" technology to produce electricity using one-tenth of the water consumed by traditional "wet-cooled" power plants.
- Three hydropower projects at SNWA Rate of Flow Control Stations, consisting of a small turbine and induction generator to generate electricity through normal water delivery operations.
- Solar photovoltaic systems at water treatment facilities, generating approximately 920,000 kWh per year.
- In 2009, the SNWA secured a loan for \$2.2 million through the American Reinvestment and Recovery Act to fund an energy audit, and energy and water conservation improvements at its water treatment facilities. The project is anticipated to save 3.5 million kWh during the life of the improvements.

Subcriteria B.2—Increasing Energy Efficiency from Enhanced Water Management or Water Conservation

Under the proposed project, each acre-foot of water saved will yield an estimated 2,118 kilo-Watt hours (kWh) of energy conserved. These savings are estimated by calculating the power

required to treat deliver one acre-foot of water to the average customer (includes wholesale and purveyor power uses).

Through the 2010/2011 WSL Program, the region will save an estimated 2.9 million kWh each year, with a total savings of more than 147 million kWh through the life of the project.

$$\text{Energy Savings} \quad 1,390 \text{ AFY} \times 2,118 \text{ kWh} = 2,944,020 \text{ kWh}$$

At present, more than 13% of energy used by the SNWA is generated through renewable resources. The savings generated by the proposed project will allow the SNWA to reduce its non-renewable market purchases, increasing the emphasis on renewable energy.

Criteria C- Addressing Endangered Species Concerns

The Colorado River watershed contains a number of sensitive and protected species, including four endangered fish, four endangered birds and one endangered invertebrate. In March 1994, the U.S. Fish and Wildlife Service designated 1,980 miles of river as “critical habitat” for the four listed fish within the Colorado River Basin. The presence of these listed species makes Endangered Species Act (ESA) compliance a major component of resource planning along the Colorado River and its tributaries.

Management of the River’s resources is key to protecting these species and their habitats. Although the conversion of urban turf landscaping provides no direct benefits to threatened or endangered species, water conservation achievements can indirectly increase Reclamation’s flexibility in managing Lake Mead and Colorado River water resources.

Construction activities associated with the conversion of turf will not harm or negatively impact any of Southern Nevada’s threatened or endangered species. All landscape conversions will be completed by private parties and implemented on private land within previously developed residential and commercial areas in Southern Nevada.

Criteria D- Other Contributions to Water Supply Sustainability

The intent of the WSL Program is to make more water available to respond to the challenges of growth, climate change and drought. The program is a direct effort to establish a more efficient and sustainable water supply for Southern Nevada. The water that will be conserved through this initiative is currently being used consumptively for landscape irrigation. Water conserved by the establishment of more efficient landscaping approaches will, in the short-term, reduce system demands and allow for Nevada’s unused Colorado River apportionment to be used for other purposes, including banking initiatives in California, Arizona and Southern Nevada, which provides for greater security during times of drought and climate change. Long-term, Southern Nevada is projected to increase by more than 1 million residents by 2035. Conservation efforts extend Southern Nevada’s water resources and secure future banked resources to meet the demands of growth and offset potential shortages associated with drought.

Criteria E- Water Marketing and Banking

Water conservation efforts in Southern Nevada directly correlate with regional water banking initiatives. Water conserved through the WSL Program has allowed SNWA to bank substantial quantities of Nevada's unused Colorado River apportionment in the Southern Nevada Water Bank, California Water Bank and Arizona Water Bank. The act of storing conserved water provides greater surety of supply to meet demands particularly during times of drought and possible water shortage. These resources will support the approximately 2 million current Southern Nevada residents and future residents in excess of an estimated 3 million by 2035.

In 2004, the SNWA and Colorado River Commission of Nevada (CRC) entered into initial agreements with the Metropolitan Water District (MWD) and Reclamation to bank unused Nevada Colorado River water in Southern California until it is needed. The agreement with MWD was amended in 2009 to provide additional terms and conditions for storage and recovery. The agreement assists California through its current shortage condition and diversifies Southern Nevada's resource portfolio. Under the agreements, Nevada can recover up to 30,000 AF per year from the storage account during normal water supply conditions, beginning in the year 2022 or earlier in the event of declared Colorado River shortages. To date, the SNWA has banked 70,000 AF in California. California water banking is a regionally significant initiative, providing resource managers in both states with flexibility.

Beginning in 2001, the SNWA, the Arizona Water Banking Authority (AWBA), the Arizona Department of Water Resources, Central Arizona Water Conservation District and the CRC entered into agreements for the SNWA to establish a bank of storage credits in Arizona for future use. The SNWA acquires storage credits by paying the AWBA to bank unused Arizona or Nevada Colorado River water in Arizona's underground aquifer. Subsequent amendments, including a 2009 amendment, provide the SNWA with a guarantee that the AWBA will store 1.25 million acre-feet of water for SNWA in the Arizona Water Bank. As part of the agreement, SNWA can recover 40,000 AFY of consumptive use during a normal Colorado River water supply year with advanced notice, as well as the opportunity to recover additional water from Arizona to make up for reductions in Nevada's basic apportionment during Colorado River shortages. In addition, the SNWA has directed approximately 60,000 AF of unused Nevada Colorado River water to AWBA for banking on SNWA's behalf. The SNWA's conservation efforts directly contributed toward making this water available for banking in the in the Arizona Water Bank.

The SNWA and its member agencies manage the Southern Nevada Water Bank within the Las Vegas Valley Groundwater Basin. Since program inception in 1987, unused Colorado River water has been artificially recharged into the Las Vegas Valley aquifer. This resource is a critical tool in managing summer peak-use demands and is an important component in the SNWA water resource portfolio. To date, Southern Nevada has stored 333,639 AF of water in the local groundwater basin for future use, with an additional 17,378 acre-feet banked in the Las Vegas Valley available for the benefit of the Las Vegas Valley Groundwater Management Program. (The water banked on behalf of the LVVGMP will remain in storage, and it is not intended to be used for SNWA's future use.) As opportunities arise and circumstances warrant, this water bank will continue to be utilized for water banking initiatives.

Agreements and related permits are in place in support of the described actions. No known legal constraints limit the described water marketing/banking initiatives. Reclamation regulations permit all of the above-mentioned activities.

Criteria F- Demonstrated Results

The SNWA has developed a number of planning documents that guide the management, acquisition and conservation of its water resources. To help plan for the future, the SNWA has developed and maintains a comprehensive Water Resource Plan and portfolio of water resources (available at http://www.snwa.com/html/wr_resource_plan.html). This document includes a 50-year planning horizon where future water resources are assessed against projected demands. The plan is reviewed annually and updated as needed. Since 1996, the plan has been revised nine times to reflect rapidly changing conditions driven by drought and growth. The plan considers the both conservation water initiatives and banking arrangements as important goals and resources. The WSL Program is specifically highlighted as an important conservation tool, which extends the region's water resources (see page 17).

In addition, and in accordance with Reclamation requirements for Section 210(b) of the Reclamation Reform Act of 1982, the SNWA maintains a regional water conservation plan that identifies water conservation strategies and goals to protect and extend Southern Nevada's available water resources (available at http://www.snwa.com/html/cons_plan.html). The SNWA works closely with its member agencies to refine conservation strategies and programs that are appropriate for the community. The 2009-2014 SNWA Conservation Plan is currently on file with Reclamation. This plan sets a new target GPCD of 199. The Conservation Plan identifies the WSL Program as a critical tool in achieving this conservation goal.

In support of its extensive conservation programming, the SNWA has implemented thorough performance measures and tracking programs. A detailed description of the analysis, processes and reviews performed by SNWA is included in Section F- Performance Measures for Quantifying Post-project Benefits (see page 16).

Criteria G- Project Financing and Cost Sharing

The SNWA has four key funding sources, which include: quarter cent sales tax, connection fees, commodity fees, and reliability charges. These revenue sources provide the organization with a mix of funding sources, which help to ensure the financial stability and capacity of the organization. Matching contributions for the 2010/2011 WSL Program will be derived from bond proceeds.

The total cost of the project is \$10,550,000 – the SNWA will be the sole provider of \$9,550,000 in matching contributions. The SNWA's Fiscal Year 2010/2011 budget contains adequate funding to support project activities and matching requirements. In the past two fiscal years, the SNWA has budgeted nearly \$35 million annually for conservation programs and is capable of managing program capacity. Due to diminished revenue streams, driven by current economic conditions, the SNWA has been required to scale back its FY 2010/2011 WSL Program budget by 62% over the previous year. Reclamation funding will provide an important contribution to

continuing the impact and capacity of this program. The proposed work will not result in operations and maintenance obligations in future calendar years.

In addition to this request, a complementary request for \$300,000 has been submitted under the same program. In addition, an agreement between the SNWA and Reclamation Region 9 is under development. Under the Water Conservation Field Services Program, Reclamation Region 9 will provide \$100,000 in funding for the WSL Program, with a SNWA match of \$1,000,000. These grant and SNWA funds are separate from the proposed project funds, including SNWA’s \$9.55 million match.

Subcriteria G.1—Allocation of Costs:

All budgeted costs are allocated to direct project expenditures, in the form of either customer rebates or contracted survey work. Indirect and staff expenses will not be requested for reimbursement or as matching contributions.

Environmental costs are not included as the direct project activities. Removal of turf landscaping will be completed by private parties and implemented on private land within previously developed residential and commercial areas.

Subcriteria G.2—Additional non-Federal Funding:

The SNWA will contribute a \$9.55 million dollar cash match to this project. The non-Federal funding percentage for this project is 90.5%.

Criteria H- Connection to Reclamation Project Activities

Reclamation is a critical partner in the SNWA’s water management and conservation efforts. The Southern Nevada Water Authority diverts 90 percent of its water supply from the Reclamation managed Colorado River system. Further details regarding the SNWA-Reclamation relationship and collaborations are outlined in Section 2 (see page 7).

Section F. Performance Measures for Quantifying Post-project Benefits

Performance measures for this program will be calculated in *rebates issued, turf converted and water saved*. Total program performance measures include the issuance of \$10,550,000 in rebates, 8,115,384 square-feet of turf converted and the recurring annual conservation of 1,390 AFY. As described in the table below, Reclamation’s \$1,000,000 contribution to this program will result in the conversion of approximately 769,231 square-feet of turf and the recurring annual conservation of 132 AFY. The number of rebates issued will be available upon project completion.

Agency	Contribution	Turf Converted (square feet)	Water Conserved (AFY)
SNWA	\$9,550,000	7,346,153	1,258
Reclamation	\$1,000,000	769,231	132
Total	\$10,550,000	8,115,384	1,390

Conservation progress is measured by annually comparing the community’s actual water use to the expected water use without conservation measures in effect. To measure conservation, the

SNWA uses an explanatory regression model to determine the variables that influenced Southern Nevada's water use during the preceding year. Although the model has identified a substantial number of relevant variables, the most significant are related to population, weather and economic indicators. These data are obtained from other agencies on an annual basis.

To track and monitor the effectiveness of the WSL Program's performance, the SNWA developed the Water Efficiency Incentive and Rebate Database (WEIRD). Designed in-house and launched in September 2004, the WEIRD database tracks all participants, processes and results related to the WSL Program. Important features include individual participant tracking, Clark County Assessor property record information, rebate application information, site assessment information, converted square footage, and rebate amounts. Other functions include the ability to run various reports on program participation, to track quality assurance performed on staff work, and to run queries on numerous tracking and enrollment options. All of these functions allow the database to serve as the primary method for tracking performance measures. Information regarding results of the program can be made available to the Reclamation as needed, or quarterly through progress reporting processes. At project completion, the Reclamation will be provided with a report summarizing the number of square feet converted, rebates issued, AFY saved and other relevant program information.

Section G. Description of Potential Environmental Impacts

The elements of this proposal are not anticipated to have any environmental impacts that would require consideration under NEPA or NHPA. Work will be implemented on private land, within urbanized Southern Nevada communities, all of which have been previously disturbed. Environmental benefits of the proposed project are outlined in Section C (see page 12).

Section H. Required Permits or Approvals

As a non-construction program, it is not anticipated that the implementation of this project will require the issuance of any permits. Property owners of exceptionally large projects may be required to seek permits applicable to the size and scope of work being performed. However, acquisition of such a permit would be the responsibility of the property owner. Such an occurrence is an exception and is not reflective of the standard landscape conversation project.

The WSL Program budget and survey contracts must be authorized and approved by the SNWA Board of Directors.

Section I. Funding Plan and Letters of Commitment

Matching contributions for the 2010/2011 WSL Program will be derived from bond proceeds currently held in the SNWA Enterprise Fund.

No in-kind contributions are incorporated into this proposal.

In addition to this request, a complementary request for \$300,000 has been submitted under the same program. In addition, an agreement between the SNWA and Reclamation Region 9 is under development. Under the Water Conservation Field Services Program, Reclamation Region 9 will provide \$100,000 in funding for the WSL Program, with a SNWA match of \$1,000,000. These grant and SNWA funds are separate from the proposed project funds, including SNWA's \$9.55 million match.

Section J. Official Resolution

An official resolution authorizing the submission of this proposal and confirming the subject matching requirements under this grant program will be submitted for consideration at the May 20, 2010 SNWA Board meeting, and submitted to Reclamation thereafter.

Section K. Budget Proposal

The following details the planned expenditures related to the implementation of the 2010/2011 WSL Program.

Budget Form

BUDGET ITEM DESCRIPTION	COMPUTATION		RECIPIENT FUNDING	RECLAMATION FUNDING	TOTAL COST
	\$/Unit and Unit	Quantity			
SALARIES AND WAGES	NA	NA			
FRINGE BENEFITS	NA	NA			
TRAVEL	NA	NA			
EQUIPMENT	NA	NA			
SUPPLIES AND MATERIALS	NA	NA			
OTHER (REBATES)					
Customer Rebates	\$1.30 square feet	8,115,384	\$9,550,000	\$1,000,000	\$10,550,000
CONTRACTUAL	NA	NA			
Regulatory and Environmental Compliance	NA	NA			
TOTAL DIRECT COSTS			\$9,550,000	\$1,000,000	\$10,550,000
INDIRECT COSTS - 0%			\$0.00	\$0.00	\$0.00
TOTAL PROJECT COSTS			\$9,550,000	\$1,000,000	\$10,550,000

Budget Narrative

All costs included in this proposal are directly related to rebate and contract costs. Program costs for salaries/wages, fringe benefits, travel, equipment and other supplies and materials are not being requested for consideration as either match or reimbursable expenditures. All costs are direct and necessary for project implementation. The non-federal contribution is 90.5 percent; Federal contributions are 9.5 percent.

Salaries and Wages

Reclamation funding will not be expended for program administration. In addition to the SNWA's matching contribution, the SNWA will assume all overhead costs necessary to operate the program, including staffing, administration, marketing and other duties associated with assuring a successful program. Although not included in the budget proposal all rebate management processing activities will be implemented by in-house SNWA staff and not subject to Davis-Bacon.

Fringe Benefits

Not applicable to this project.

Travel

Not applicable to this project.

Supplies and Materials

Not applicable to this project.

Other (rebates)

Expenditures totaling \$10,550,000 in customer rebates will result in the estimated conversion of approximately 8,115,384 square-feet of turf. Since January 2009, the average rebate issuance is \$1.30; it is anticipated that variance will be within a plus/minus 5 percent.

Contractual

Not applicable to this project.

Regulatory and Environmental Compliance

Not applicable to this project.

Total Direct Costs

Reclamation is being requested to contribute \$1,000,000 toward direct WSL program. The SNWA will provide a match of \$9,550,000.

Indirect Costs

Not applicable to this project.

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		Total (g)
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	
1. WSL Program	15-507	\$ 1,000,000.00	\$ 9,550,000.00	\$ 0.00	\$ 0.00	\$ 10,550,000.00
2.						0.00
3.						0.00
4.						0.00
5. Totals		\$ 1,000,000.00	\$ 9,550,000.00	\$ 0.00	\$ 0.00	\$ 10,550,000.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY					Total (5)
	(1) WSL Program	(2)	(3)			
a. Personnel	\$	\$	\$	\$	\$	0.00
b. Fringe Benefits						0.00
c. Travel						0.00
d. Equipment						0.00
e. Supplies						0.00
f. Contractual						0.00
g. Construction						0.00
h. Other	10,550,000.00					10,550,000.00
i. Total Direct Charges (sum of 6a-6h)	10,550,000.00	0.00	0.00	0.00	0.00	10,550,000.00
j. Indirect Charges						0.00
k. TOTALS (sum of 6i and 6j)	\$ 10,550,000.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 10,550,000.00

7. Program Income	\$	\$	\$	\$	\$	0.00
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SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. WSL Program	\$ 9,550,000.00	\$	\$	\$	\$ 9,550,000.00
9.					0.00
10.					0.00
11.					0.00
12. TOTAL (sum of lines 8-11)	\$ 9,550,000.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 9,550,000.00
SECTION D - FORECASTED CASH NEEDS					
13. Federal	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	\$ 1,000,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00	\$ 250,000.00
14. Non-Federal	9,550,000.00	2,387,500.00	2,387,500.00	2,387,500.00	2,387,500.00
15. TOTAL (sum of lines 13 and 14)	\$ 10,550,000.00	\$ 2,637,500.00	\$ 2,637,500.00	\$ 2,637,500.00	\$ 2,637,500.00
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				
	(b) First	(c) Second	(d) Third	(e) Fourth	
16.WSL Program	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges:	22. Indirect Charges:				
23. Remarks:					

Appendix A – SNWA System

